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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,147	11/20/2003	Gerald E. Rains	P05388US1	8999
34082	7590	12/20/2004	EXAMINER	
ZARLEY LAW FIRM P.L.C. CAPITAL SQUARE 400 LOCUST, SUITE 200 DES MOINES, IA 50309-2350			NGUYEN, VINCENT Q	
			ART UNIT	PAPER NUMBER
			2858	

DATE MAILED: 12/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/718,147

Applicant(s)

RAINS ET AL.

Examiner

Vincent Q Nguyen

Art Unit

2858

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-21 and 27-32 is/are pending in the application.
- 4a) Of the above claim(s) 16-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 13-15 and 27-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 03/01/2004.
- 4) ☒ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments:

Examiner wondered if the amendment of claims 13-21 and 27-32 or the remark is typographical error. In the remark, Applicant indicated to add new claims 27-32 that depend on claim 13. However, in the amendment of the claims, claims 28, 30-32 depend on claim 16 (Withdrawn claim) and claim 29 depends on claim 17 (Also being withdrawn).

Applicant called back (12/14/2004) and explained that claims 28, 31, 32 depend on claim 13. claim 29 depend on claim 28. Claim 30 depends on claim 27.

Examiner will fix the claims 28-32 in accordance to the telephone interview. Therefore, claims 28, 31 and 32 depend on claim 13. Claim 29 depends on claim 28. Claim 30 depends on claim 27.

If the case is allowable, Applicant authorized the examiner to cancel the non-elected claims 16-21.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of claims 13-15 and 27-32 in the reply filed on 11/12/2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). The Election/Restrictions requirement is still deemed proper and is thus made FINAL.

Claims 16-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Timothy J. Zarley on December 13 and 14, 2004.

3. In the amendment of claims filed 11/12/2004, the claims are amended as follows:

In claims 28, 31, 32, lines 1, replace 16 with 13 (To make the claims depend on claim 13 instead of claim 16).

In claim 29, line 1, replace 17 with 28 (To make the claim depend on claim 28 instead of 17).

In claim 30, line 1, replace 16 with 27 (To make the claim depend on claim 27 instead of 16).

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because it should be on a separate sheet. Further, the abstract should include which is new in the art to which the invention pertains (Elements such as a guard proximate to the parallel to the sense plate ... etc.

in the abstract of previous Applications should be removed). Correction is required.
See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 13, 15, 28, 31, 32, are rejected under 35 U.S.C. 102(b) as being anticipated by Nelson et al. (5,218,309).

Regarding claims 13, 31, Nelson et al. discloses a method comprising the step of selecting a frequency from a plurality of frequencies (Any first frequency of the two frequencies (column 2, line 9; column 3, line 8) being applied to the system); applying the frequency to a parallel plate cell filled with grain (Column 2, lines 61-68); measuring a first complex admittance of the parallel plate cell filled with grain (Column 2, lines 3-15); applying the frequency to reference (Nelson et al. does not explicitly disclose but inherent that the frequency is reference to the second frequency for comparison); measuring a second complex admittance of the reference (Column 3, lines 16-17; see also table 1); computing a complex permittivity from the first complex admittance and the second complex admittance (Entire column 4).

Regarding claims 15, 32, Nelson et al. discloses the step of selecting the second reference admittance from a plurality of reference admittances (Column 3, lines 52-54).

Regarding claim 28, Nelson et al. discloses the step of using a plurality of references (Phase angle, capacitance, reactance; column 3, lines 10-15) determine one or more distortion characteristics of measuring the real and imaginary components (The distortion is any measured value outside of the curves in figure 1).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (5,218,309) in view of Funk et al. (4,584,655).

Regarding claims 14, Nelson et al. does not disclose the step of applying a calibration factor to the reference admittance to calculate an empty cell admittance.

Funk et al. discloses a moisture tester and further discloses the step of applying a calibration factor to the reference admittance to calculate an empty cell admittance (Funk et al.'s column 7, lines 29-32) for the purpose of enhancing the moisture tester (Funk et al.'s column 3, lines 22-26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the step of applying a calibration factor to the reference admittance as taught by Funk et al. into the system of Nelson because calibration would enhance the accuracy for determining the moisture.

10. Claims 27, 30, are rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (5,218,309) in view of Brown et al. (3,870,951).

Regarding claims 27, 30, Nelson et al. disclose the step of measuring real and imaginary components (Table 1) of an excitation voltage having a frequency applied driven plate parallel plate measuring real and imaginary components (Column 5, lines 1-8); calculating the first complex admittance (Y) of the parallel plate cell; calculating the second complex admittance of reference admittance; and calculating a grain complex permittivity (Table 1).

Nelson et al. does not disclose the step of measuring a sense current sensed at a sense plate of the parallel plate cell.

Brown et al. discloses a moisture measuring probe and further discloses the step of measuring a sense current sensed at parallel plate cell (Brown et al.'s column 1, lines 8-11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the step of measuring a sense current sensed at parallel plate cell into the system of Nelson because it is a routine to measure the moisture (Brown et al.'s column 1, lines 9-11).

11. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (5,218,309) in view Myers (5,561,250).

Regarding claim 29, Nelson does not disclose the step of correcting for the determined distortion characteristics.

Myers discloses a system and method similar to that of Nelson et al. and further discloses a step of correcting the distortion (Myers's column 5, lines 49-50) for the purpose of improve accuracy of the measurement (Myers's column 5, line 9-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the step of correcting the distortion as taught by Myers into the system of Nelson et al. because it would have been desirable to improve the accuracy of the moisture measurement.

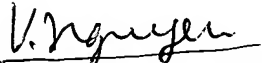
Contact Information

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vincent Q Nguyen whose telephone number is (571) 272-2234. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (571) 272-2233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Vincent Q. Nguyen
Primary Examiner
Art Unit 2858


December 14, 2004